

What is claimed is:

1. A device for analyzing a sample, comprising a suction pressure generating means, a drawing channel in communication with said suction pressure generating means, an analytical section formed in said drawing channel, and an opening formed at the end of said drawing channel, wherein in use a sample is drawn by a suction pressure developed by said suction pressure generating means into said opening, and then said sample is transferred by the suction pressure through said drawing channel into said analytical section.

2. A device as claimed in claim 1, further comprising a bypass channel branching from a portion of the drawing channel between said analytical section and said opening and being communicated with said suction pressure generating means, wherein the relationship between three liquid flow resistances, namely, the liquid flow resistance (X) in a portion of said drawing channel between said analytical section and said suction pressure generating means, the liquid flow resistance (Y) in said bypass channel, and the liquid flow resistance (Z) in a portion of said drawing channel between the branching portion of said bypass channel and said analytical section is  $X > Y > Z$ .

3. A device as claimed in claim 1, wherein a plurality of drawing channels are formed, and analytical sections are formed

in each of said drawing channels, the ends of said respective drawing channels merging and forming one opening.

4. A device as claimed in claim 2, wherein a plurality of drawing channels are formed, and analytical sections are formed in each of said drawing channels, the ends of said respective drawing channels merging and forming one opening, and the bypass channel branching from a portion of said drawing channels between said merging portion and said opening and communicating with said suction pressure generating means.

5. A device as claimed in claim 1, further comprising a stopper which is gas-permeable and liquid-impermeable provided in said drawing channel between said suction pressure generating means and said analytical section, by which a flow of a sample into said suction pressure generating means can be prevented.

6. A device as claimed in claim 5, wherein the stopper is made from a hydrophobic porous material.

7. A device as claimed in claim <sup>32</sup>5, wherein a plurality of analytical sections are formed in the drawing channel, and the stopper is provided in the drawing channel between said suction pressure generating means and the analytical section closest to the suction pressure generating means.

B  
subcl

8. A device as claimed in claim 5, wherein a plurality of drawing channels are formed, analytical sections are formed in each of said drawing channels, the ends of said drawing channels merging and forming one opening.

B 9. A device as claimed in claim <sup>28</sup>1, wherein the opening has a shape enlarging toward the end.

B 10. A device as claimed in claim <sup>28</sup>1, wherein a liquid pooling portion is formed between the opening and the drawing channel, and an air vent passage branches from a portion of the drawing channel between the liquid pooling portion and the analytical section, the end of the air vent passage opening to the outside.

11. A device as claimed in claim 10, wherein the liquid flow resistance in the air vent passage is larger than the liquid flow resistance in the liquid pooling portion.

B 12. A device as claimed in claim <sup>28</sup>1, wherein the analytical section formed in the drawing channel serves as a reagent positioning section and a reagent reaction section.

B 13. A device as claimed in claim <sup>28</sup>1, wherein a reagent positioning section, a reagent reaction section and an analytical section are provided independently in certain positions in the drawing channel.

14. A device as claimed in claim 13, wherein a plurality of reagent positioning sections are provided in certain positions in the drawing channel.

*Sub*  
*B*  
*B*  
15. A device as claimed in claim <sup>28</sup>1, wherein the suction pressure <sup>generator</sup>~~generating means~~ is a suction pressure generating chamber capable of changing its volume.

16. A device as claimed in claim 15, wherein a vent is formed in the suction pressure generating chamber.

*Sub*  
*B*  
*B*  
17. A device as claimed in claim <sup>28</sup>1, wherein the suction pressure <sup>generator</sup>~~generating means~~ is a suction pressure generating tube.

*B*  
18. A device as claimed in claim <sup>28</sup>1, wherein a pair of electrodes comprising a working electrode and a counter electrode is provided in at least one analytical section.

19. A method for analyzing a sample comprising the steps of:  
preparing a device for analyzing a sample, said device comprising a suction pressure generating means, a drawing channel in communication with said suction pressure generating means, an analytical section formed in said drawing channel, and an opening formed at the end of said drawing channel;

developing a suction pressure by means of the suction

pressure generating means and thereby drawing a sample into the opening;

further drawing the sample by said suction pressure through the drawing channel into the analytical section; and  
analyzing said sample in the analytical section.

20. A method for analyzing a sample comprising the steps of:

preparing a device for analyzing a sample, said device comprising a suction pressure generating means, a drawing channel in communication with said suction pressure generating means, an analytical section formed in said drawing channel, and an opening formed at the end of said drawing channel, said device further comprising a bypass channel branching from a portion of the drawing channel between said analytical section and said opening and being communicated with said suction pressure generating means, wherein the relationship between three liquid flow resistances, namely, the liquid flow resistance (X) in a portion of said drawing channel between said analytical section and said suction pressure generating means, the liquid flow resistance (Y) in said bypass channel, and the liquid flow resistance (Z) in a portion of said drawing channel between the branching portion of said bypass channel and said analytical section is  $X > Y > Z$ ;

developing a suction pressure by means of the suction pressure generating means and thereby drawing a sample into the opening;

further drawing the sample by said suction pressure through

the drawing channel into the analytical section, while discharging an excess of sample and/or entrained air into said bypass channel and through said bypass channel into said suction pressure generating means; and

analyzing said sample in the analytical section.

21. A method as claimed in claim 19, wherein said device further comprises a stopper which is gas-permeable and liquid-impermeable provided in said drawing channel between said suction pressure generating means and said analytical section, by which a flow of a sample into said suction pressure generating means can be prevented.

22. A method for analyzing a sample comprising the steps of:  
preparing a device for analyzing a sample, the device comprising a suction pressure generating means, a drawing channel in communication with said suction pressure generating means, an analytical section formed in said drawing channel, and an opening formed at the end of said drawing channel, the opening having a shape enlarging toward the end;

contacting the opening with a sample, thereby drawing said sample by capillarity into said opening or into said liquid pooling portion to be retained;

developing a suction pressure by means of the suction pressure generating means;

drawing the sample retained in said opening or in said

liquid pooling portion by the suction pressure through the drawing channel into the analytical section; and  
analyzing said sample in the analytical section.

23. A method for analyzing a sample comprising the steps of:  
preparing a device for analyzing a sample, the device comprising a suction pressure generating means, a drawing channel in communication with said suction pressure generating means, an analytical section formed in said drawing channel, and an opening formed at the end of said drawing channel, the device further comprising a liquid pooling portion formed between the opening and the drawing channel and an air vent passage branching from a portion of the drawing channel between the liquid pooling portion and the analytical section, the end of the air vent passage opening to the outside;

contacting the opening with a sample, thereby drawing said sample by capillarity into said opening or into said liquid pooling portion to be retained;

developing a suction pressure by means of the suction pressure generating means;

drawing the sample retained in said opening or in said liquid pooling portion by the suction pressure through the drawing channel into the analytical section; and

analyzing said sample in the analytical section.

24. A method as claimed in claim 19, wherein the sample is

analyzed by an optical means.

25. A method as claimed in claim 19, wherein the sample is analyzed by an electrochemical means.

26. An apparatus for analyzing a sample comprising an optical measuring system including a light irradiating section and a light detecting section, and a device as claimed in claim 1, wherein the device for analyzing a sample is arranged so that the analytical section of the device can be irradiated with light from said light irradiating section, and so that said detecting section can detect a transmitted light, fluorescence, or a reflected light in said analytical section.

27. An apparatus for analyzing a sample comprising an electric signal generating means and an electric signal detecting means, and a device as claimed in claim 18, wherein the working electrode of said device and said electric signal generating means are connected to each other, and the counter electrode of said device and said electric signal detecting means are connected to each other.

Add > B20

Add > C3